

Weekly Report

December 25, 2016

1 Work

Semantic Trajectory

This week, I read a few pages of Ding Ziang's phd thesis and I begin reading a book **Deep Learning** by MIT. Also, I spend some time to understanding vtk format. We can get 6462 locations with 6462 color scalars. The vtk file is read by VTKLoader library designed for three.js. In Fig1, the opacity of circle encodes color scalars. The website can not load map immediately because of network. Though I can find that circles in downtown have higher opacity than others, the visualization encoding could be improved.

2 Plan for next week

- Read some papers about line field.

3 Paper Reading

3.1 “Ghost Cities” Analysis Based on Positioning Data in China

根据百度poi，确定住宅区，然后用百度地图统计住宅区的人数，人数较少的可能就是鬼城。这里有一个问题是poi是一个点，住宅区是区域，无法直接统计人数，文章中通过算法解决。

3.2 Measuring Economic Activities of China with Mobile Big Data

根据百度地图的位置信息，用人的流量来推测某个建筑区域（电影院，apple store）经济行为。

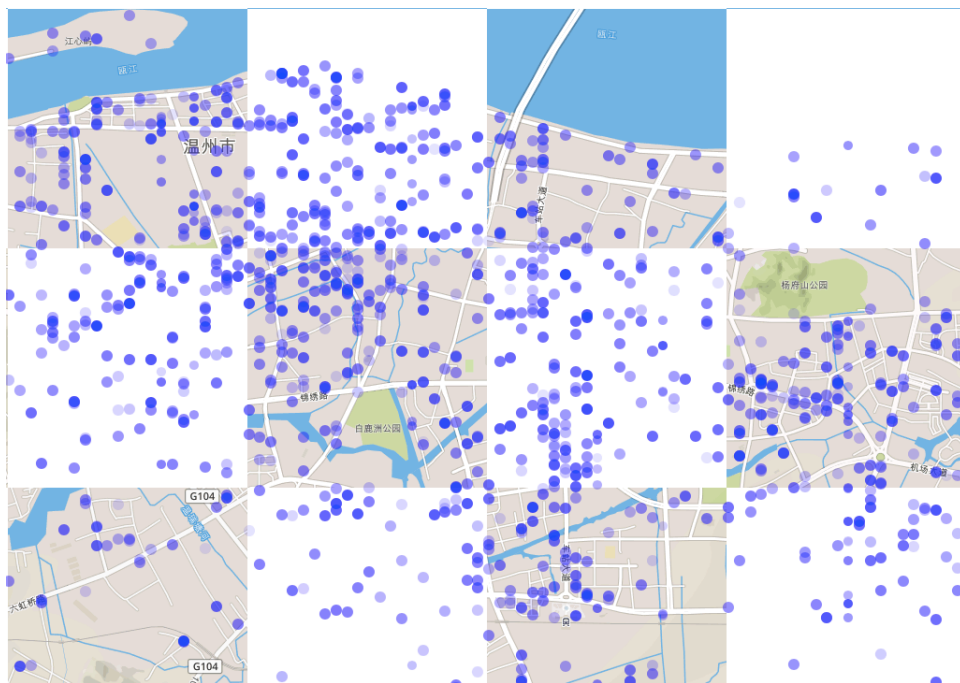


Figure 1:

3.3 Inferring trip purposes and uncovering travel patterns from taxi trajectory data

从出租车下车点推断人的目的地是周围的某一个poi，所以是一个概率分布，从而可以统计不同类型poi的人数。

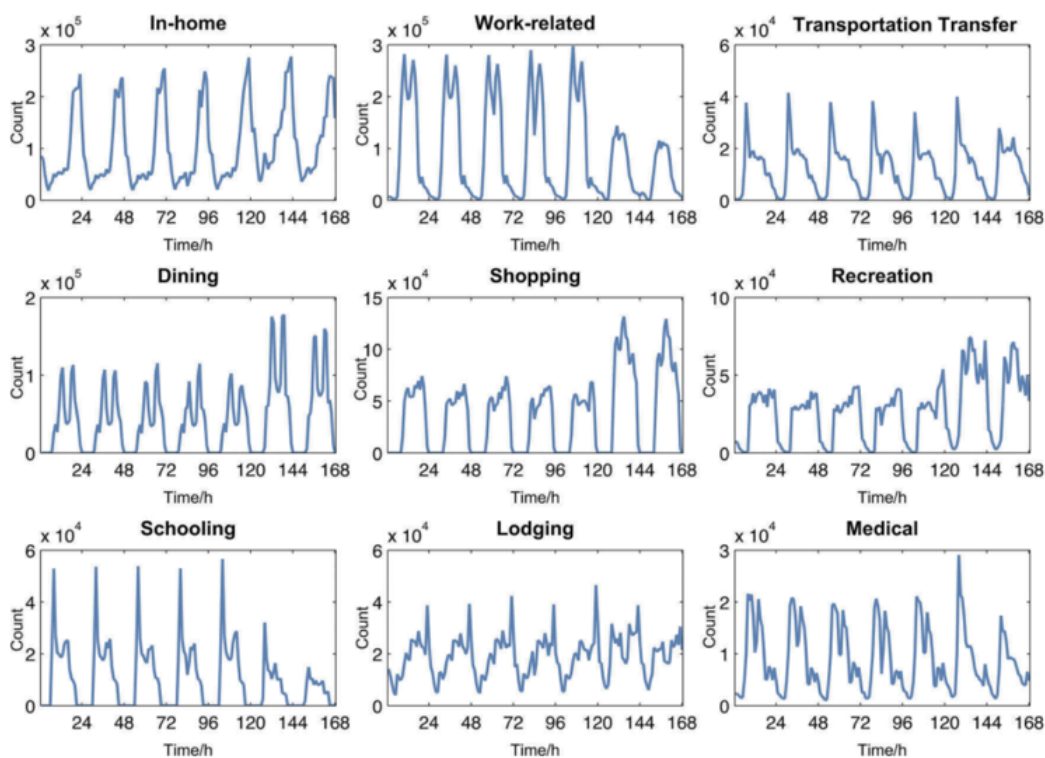


Figure 2:

3.4 Semantic Enrichment of Movement Behavior with Foursquare – A Visual Analytics Approach

由于自动算法对选择停留点附近poi有许多不确定性，这篇文章用可视交互的方法降低不确定性，然后就可以对一个区域的功能进行分析。

3.5 Detecting Urban Black Holes Based on Human Mobility Data

这篇文章是利用出租车、公共自行车的轨迹，对道路构建网络，然后检测子图在某一段时间内具有不断涌入的人流的情况，可以探测出一些大型活动开场前和开场后的情况和火车站等人流比较大的地点。